

WHAT IS CLAIMED IS:

1. A method comprising:
 - determining a characteristic of a communication channel; and
 - selecting, on the basis of the determined characteristic, a pre-computed equalizer
- 5 characteristic for application to signals received via the communication channel.
2. The method of claim 1, wherein the communication channel includes a cable and the determined characteristic of the communication channel is an approximate length of the cable.
3. The method of claim 2, wherein the approximate length of the cable is determined by
- 10 an automatic gain control block.
4. The method of claim 2, wherein the selecting includes selecting a pre-computed feed forward equalizer (FFE) from among a plurality of pre-computed FFEs stored in a receiver coupled to the communication channel.
5. The method of claim 4, further comprising:
 - 15 applying the selected pre-computed FFE to the signals received via the communication channel; and
 - applying an adaptive FFE, in parallel with the selected pre-computed FFE, to the signals received via the communication channel.
6. An apparatus comprising:

a first circuit, to couple to a communication channel, to determine a characteristic of the communication channel; and

a second circuit, responsive to the first circuit, to select, on the basis of the determined characteristic, a pre-computed equalizer characteristic for application to
5 signals received via the communication channel.

7. The apparatus of claim 6, wherein:

the communication channel includes a cable;

the first circuit is to couple to the cable; and

the characteristic of the communication channel determined by the first circuit is
10 an approximate length of the cable.

8. The apparatus of claim 7, wherein the first circuit comprises an automatic gain control circuit.

9. The apparatus of claim 7, wherein the second circuit stores a plurality of pre-computed feed forward equalizers (FFE) and is capable of selecting one of the stored
15 pre-computed FFEs on the basis of a signal received from the first circuit.

10. The apparatus of claim 9, wherein the second circuit includes circuitry to apply the selected pre-computed FFE to the signals received via the communication channel;

and further comprising:

a third circuit to apply an adaptive FFE, in parallel with the selected pre-computed
20 FFE, to the signals received via the communication channel.

11. An apparatus comprising:

first means, for coupling to a communication channel and for determining a characteristic of the communication channel; and

5 second means, responsive to the first means, for selecting, on the basis of the determined characteristic, a pre-computed equalizer characteristic for application to signals received via the communication channel.

12. The apparatus of claim 11, wherein:

the communication channel includes a cable;

the first means is for coupling to the cable; and

10 the characteristic of the communication channel determined by the first means is an approximate length of the cable.

13. The apparatus of claim 12, wherein the first means comprises an automatic gain control circuit.

14. The apparatus of claim 12, further comprising:

15 means for storing a plurality of pre-computed feed forward equalizers (FFE's);

and wherein the second means includes means for selecting one of the stored pre-computed FFEs on the basis of a signal received from the first means.

15. The apparatus of claim 14, further comprising:

20 means for applying the selected pre-computed FFE to the signals received via the communication channel; and

means for applying an adaptive FFE, in parallel with the selected pre-computed FFE, to the signals received via the communication channel.

16. An apparatus comprising:

interface means for coupling to a cable;

5 storing means for storing a plurality of pre-computed feed forward equalizer (FFE) characteristics;

automatic gain control (AGC) means coupled to the interface means for applying gain control to signals received via the cable and for determining an approximate length of the cable;

10 selection means, coupled to the AGC means and to the storing means, for selecting one of the stored pre-computed FFE characteristics on the basis of a signal received from the AGC means, the signal received from the AGC means indicating the approximate length of the cable;

15 first equalizer means, responsive to the selection means and coupled to the interface means, for equalizing the signals received via the cable on the basis of the pre-computed FFE characteristic selected by the selection means; and

second equalizer means, coupled to the interface means in parallel with the first equalizer means, for adaptively equalizing the signals received via the cable.

17. The apparatus of claim 16, wherein each of the pre-computed FFE characteristics
20 stored by the storing means corresponds to a respective cable length.

18. The apparatus of claim 17, wherein the storing means stores eight pre-computed FFE characteristics.

19. The apparatus of claim 16, wherein the interface means is for coupling to an Ethernet cable.

20. The apparatus of claim 16, wherein the interface means is for coupling to a Gigabit Ethernet cable.

5 21. A system comprising:

a processor; and

a receiver coupled to the processor;

wherein the receiver includes:

10 a first circuit, to couple to a communication channel, to determine a characteristic of the communication channel; and

a second circuit, responsive to the first circuit, to select, on the basis of the determined characteristic, a pre-computed equalizer characteristic for application to signals received via the communication channel.

22. The system of claim 21, wherein:

15 the communication channel includes a cable;

the first circuit is to couple to the cable; and

the characteristic of the communication channel determined by the first circuit is an approximate length of the cable.

20 23. The system of claim 22, wherein the first circuit comprises an automatic gain control circuit.

24. The system of claim 22, wherein the second circuit stores a plurality of pre-computed feed forward equalizers (FFE) and is capable of selecting one of the stored pre-computed FFEs on the basis of a signal received from the first circuit.

25. The system of claim 24, wherein the second circuit includes circuitry to apply the
5 selected pre-computed FFE to the signals received via the communication channel;

and wherein the receiver further includes:

a third circuit to apply an adaptive FFE, in parallel with the selected pre-computed FFE, to the signals received via the communication channel.